

AN EVALUATION OF TEFL UNDERGRADUATE'S QUESTIONING CLASSROOM ACTIVITIES BASED ON BLOOM'S REVISED TAXONOMY

Dhestyn Ervina Sigit Cahyaningtyas¹, Yudi Basuki², Joko Nurkamto³, Ngadiso⁴
UNS, 081333345321, STKIP Trenggalek, 08113677613, UNS, 08121502914, UNS, 08122584189
redvie27@student.uns.ac.id, yudibasuki@stkipgtritreggalek.ac.id,
jokonurkamto@staff.uns.ac.id, ngadisodok@staff.uns.ac.id

Abstract

Lecturers' talk during classes stimulates active students, as a means of a successful lecture. This study investigated the levels of questioning used by lecturers. The data, collected from the participants having more than ten year professional experience, were described qualitatively. Observation and interview were used to generate the data. The findings of this study indicated the questions level based on Bloom's revised taxonomy. Mostly used was the low and middle order thinking, less encouraging students' critical thinking. Noted 66 questions or about 73% of the total question belong to low order. 22 questions or 25% of all were included medium order. The rest of them, the least of all, 2 questions or equally to 2% were high order. Thus, students and lecturers could use the Bloom taxonomy to administer class activities with sufficient preparation, while further research might examine how to employ high order thinking skill in various areas.

Keywords: undergraduate, questioning level, high order thinking, Bloom's revised taxonomy.

Introduction

Communication takes strategic place in education. In the context of classroom, communication should establish on two key components, teacher as the communicator and student as the communicant. Education is communication where there are two components, teacher as communicator and student as communicant. The objective of learning could be achieved when both parties deal with the communicative process established throughout the learning. The learning objectives achieved when the process is communicative. Despite communicative interaction between students seems to occur frequently among groups of students in the classroom, teacher could develop it into interpersonal communication in anytime to enable two-way communication. Though the intern class communication comes under group communication, teacher can anytime modify it become interpersonal communication. Thus, two-way communication is occurred.

On the teacher-students communication, teachers are in need to have communicative competence. How teachers express their

questions during the class highly influences students' participation. Good speech act motivates students to be enthusiast and assist in achieving learning objectives, optimizing teaching and learning process. Extensively, lecturers who serve in classroom teaching could also develop skills, which are based on four dimensions of lecturer's commitment which are commitment to teaching, commitment to students, lecturer's commitment to schools, and commitment to professions using confirmatory factor analysis [1].

Improving the level of lecturers' commitment has been the primary goal of institution of higher learning for the past decades [2]. To realize it, as stated before, commitment to teaching is necessary. Questioning supports the commitment to result better outcome of the lecture. Questioning in the classroom would be likely to refer to questions asked by teachers [3]. Questioning strategies can be utilized, not only toward learning content, but also to guide students to think critically and analytically, leading to deep levels of understanding [4][5]. The argument for this

practice is that teachers play as model in terms of questioning skills. Students are expected to model to teachers' questions, helping them to boost their own questioning skills [6]. The Flanders' Interaction Analysis Categories [7] also classified classroom language of teacher talk into: 1. Accept feelings, 2. Praises or encourages, 3. Accepts or uses ideas of pupils, 4. Asks questions, 5. Lectures, 6. Gives directions, and 7. Criticizes or justifies authority.

Two major enduring purposes of teacher questions are to examine students' understanding on basic facts associated with

specific content and to have students enroll the facts using critical thinking skills [8]. Whereas, Ennis [9] stated that critical thinking as reasonable, reflective thinking that is focused on deciding what to believe or do. A strong connection has been made between critical and higher order thinking in the higher cognitive levels of Bloom's taxonomy [10] and Anderson and Krathwohl's revision [11]—analyze, evaluate and create.

To describe questioning levels there are some taxonomy.

Table 1.
 The categories of questions described in Raphael's taxonomy [12]

Category of questions	Explanation
On my own	Ask for personal responses including experience, background knowledge and judgement
Author and me	Ask for answers from blended information in a passage including readers' background knowledge and experience
Think and search	Ask for answers found from different parts of a passage and making inferences
Right there	Ask for explicit answers stated in a passage

Table 2.
 Wilen stated in Ashadi and Lubis[13] questioning levels

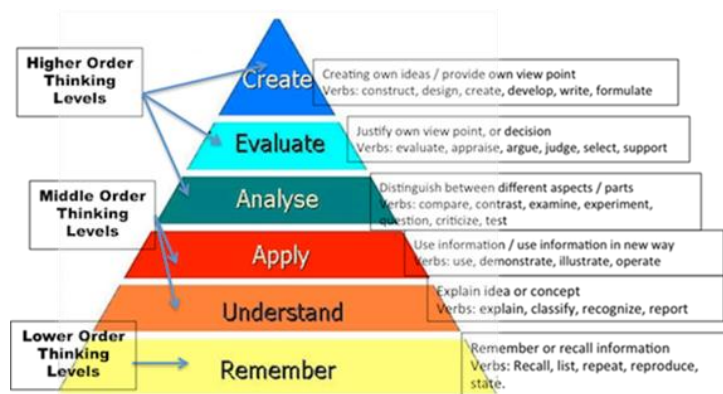
Levels		Purposes	Examples
Level I – Low Order Convergent	This is equal with Knowledge level in Bloom's taxonomy (McComas & Abraham, 2004).	The teacher's major purpose is to demand student's ability to remember or memorize answers which has already been definitely delivered in classroom.	1. Define the term _____. 2. What is a _____? 3. Who did _____? Name _____.
Level II – High Order Convergent	Comprehension and Application levels in Bloom's taxonomy are measured to be in this level.	Learners are asked to display further than recall skill but ability to apply the information and exhibit understanding.	1. How will you interpret in your own words...? 2. What is the main idea of...?
Level III – Low Order Divergent	This is equal to Analysis level in Bloom's taxonomy.	The teacher's purpose is to require learners to analyze the grounds or reasons, draw suppositions or to support an argument.	1. What is the relationship between ...? 2. What are some possible consequences?
Level IV – High Order Divergent	Synthesis and Evaluation of Bloom Taxonomy are graded in this level.	Higher-order questions demanding students to come up with solutions for substantial problems. Produce innovative ideas and practical actions.	1. Why did they (the character) choose...? 2. Create a poster to promote a

Table 3.
 Anderson and Krathwol’s taxonomy [11]

Levels	Explanation
Remembering	This is the lowest level which asks a learner to define, duplicate, list, memorize, recall, repeat, and reproduce state.
Understanding	This level asks learners if they could explain ideas or concepts by asking them to classify, describe, discuss, explain, identify, locate, recognize, report, select, translate, and paraphrase.
Applying	It involves students in applying information in a new way which requires learners to choose, demonstrate, dramatize, employ, illustrate, interpret, operate, schedule, sketch, and solve.
Analyzing	Class activities and assignments for this level require students to break information into parts to explore understandings and relationships by asking them to classify, compare, contrast, differentiate, and examine.
Evaluating	Evaluation necessitates justifying a stand or decision by asking students to appraise, argue, defend, judge, select, support, and evaluate.
Creating	This is the highest level of instructional outcome requiring students to compose, construct, devise, formulate, predict, and infer.

The Anderson and Krathwol’s taxonomy details the levels into lower, middle and higher order thinking levels as follow.

Figure 1.
 Anderson and Krathwol’s taxonomy [11]



To meet the objectives this study applied the Bloom’s revised taxonomy to discriminate lecturers’ questioning levels used in STKIP PGRI Trenggalek.

Methodology

1. Research design

This was a qualitative study. The data were presented narratively. Based on Clandinin and Conelly [14], narrative study is a way of understanding and inquiring into experience through collaboration between the researcher and participants in a certain

place and in a social interaction. The procedures for implementing this research consist of focusing on studying one or two individuals, gathering data through the collection of their stories, reporting individual experiences, and chronologically ordering (or using life course stages) the meaning of those experiences [15].

A narrative study employed to find a rich description of placement experiences and an exploration of its meaning [16]. The other bases in employing a narrative study were as follows.

- a. The first basis was that this research focused on individuals. In this research, the researcher focused on the three individuals who were distinguished experts.
- b. The second basis was that the study collected the individual's experiences of teaching HOTS.

2. Research participant

The research took place at English Department of STKIP PGRI Trenggalek as the researcher teaches at the institution. The data resources were three lecturers; one with doctoral degree and the rest two hold master degree. To reach the objectives, all of the chosen participants had about ten-year professional experience on English language teaching.

3. Data collection method

The sources of data were the informants, the three lecturers, and students as supplementary data source. The data collection methods were class observation and in-depth interview. The observation was done by joining each lecturer's classes. The data obtained from observation were recorded and transcribed. The interview followed up the observation process through direct meeting and by phone for additional information needed. To complete the data collection, students were interviewed massively.

4. Data analysis

This research uses Constant Comparative Method (CCM) as the technique of analyzing the data. Four elements of CCM proposed were used [17], those were:

- a. Comparing incidents applicable to each category
The researcher read and re-read the data to compare one data to other data in order to be able to group the data into as many categories as categories emerge or as data emerge that fit an existing category.

b. Integrating categories and their properties

This process starts out in a small way, memos, and possible conferences were short. As the coding continued the constant comparative units change from the comparison of incident with incident to comparison of incident with properties of the category that resulted from initial comparison of incidents.

c. Delimiting the theory

Delimiting theory occurred at two levels, the theory and the categories.

- i) First, the theory solidified, in the sense that major modifications became fewer and fewer as the analyst compared the next incidents of a category to its properties.

- ii) The second level was reduction the original of categories for coding.

d. Writing the theory

The coded data, a series of memos, and a theory were processed. The memos provided the content behind the categories, which became the major theme of the theory. These systematic designs of CCM emphasized the use of open, axial, and selective coding.

Finding and Discussion

1. Finding

a. Observation

The findings of this study showed up that the lecturers arranged different styles of speech act. They were gotten from the observation, took place in three classrooms for each lecture of any different lessons such writing, speaking, structures, and intro to thesis. It was collected 90 considerably the most qualified questions. The data are presented below:

Table 4.
 Levels of questions according to Bloom's revised taxonomy

Levels	Frequency	Percentage
Low Order	66	73%
Medium Order	22	25%
High Order	2	2%
Total	90	100%

The data above were obtained from these following sources:

Table 5.
 Questioning of participant 1

Levels	Frequency	Percentage
Low Order	16	53%
Medium Order	12	40%
High Order	2	7%
Total	30	100%

Table 6.
 Questioning of participant 2

Levels	Frequency	Percentage
Low Order	24	80%
Medium Order	6	20%
High Order	0	0%
Total	30	100%

Table 7.
 Questioning of participant 3

Levels	Frequency	Percentage
Low Order	26	87%
Medium Order	4	13%
High Order	0	2%
Total	30	100%

Table 4 described that the lecturers mostly used low order questioning. Noted 66 questions or about 73% among the total question belong to low order. 22 questions or 25% of all were included medium order. The rest of them, the least of all, 2 questions or equally to 2% were high order.

Table 5, 6 and 7 represented each lecturer's questionings. Ten most powerful assignments and activities were selected of every single class where there were 3 classes of each lecturer that could be followed. Table 5 was the result of the doctoral lecturer. From 30 questions, 7% were high order thinking skill, and 40% were noted as medium order. The highest was the low order, having 53% part of all.

Table 6 and 7 were the questioning of master degree lecturers. With almost the same result, more than 80% were included lower order. On the contrary, none of them used high order.

b. Interview

i) Interviewing the lecturers

The interview informed that lecturers were known HOTS well. They have applied it during their daily classes. A lecturer decided it to improve students' critical thinking skill. Another considered it as tool for students to be more creative. Other lecturer stated that HOTS was needed to train students thinking critically. Those were the importance of HOTS.

The problem was students didn't understand each questioning directly. Lecturers should repeat the questioning, even translated it. They needed further explanation, resulting in the substance of high order was dismissed. It lead lecturers manage the classes in mixed language, Javanese, Indonesian and English. To make students familiar, English was used. Moreover, when students didn't understand the lecturers' explanations or questions, additional clarifications were needed. This case might decrease the sense of HOTS. Further, Javanese was used only to break the ice and to bring fun into the class. Those were the reasons why the lecturers used mixed languages.

Another problem was not all subject could be easily used HOTS for the questioning. For the subject related to four English skills, there's wider occasion to practice it. Otherwise, for the subjects such grammar, structure and intro to research, where lecturers were mostly explain the material, the use of HOTS based questioning was not easy to apply.

One surprising statement was that they supposed many of their

questionings were higher order. They never copied their questioning from textbooks. They generated those questions themselves, some were directly stated that several were prepared questions because of yearly routines.

Further, they defined that high order was not convenient to administer in every single subject. The lecturer who taught structure claimed himself were rarely used the skill. He thought what he must do was just explaining the structure and made the students practice a lot. Even the speaking lecturer asserted that he seldom used high order. He proclaimed that the most important was making the students speak up even if using lower order thinking skill.

ii) Interviewing the students

Interviewing students resulted several information. Mostly students didn't understand at the first time they listen to the lecturers' questioning. They wait for the additional explanation and the clear translation indeed. It lead the lecturers convey the message in more than one language.

Misunderstanding would also appear during the class questioning. Longer questions supported students' wrong perceptions. Moreover, the use of rare vocabularies was also the reason why students didn't understand the command. Additional explanation and even translation were the solution generally.

Pertanyaan	Jawaban
Ketika guru menjelaskan/bertanya lebih suka menggunakan bahasa apa?	Campuran
Ketika menjelaskan dalam bahasa ing paham tidak?	2 anak paham Sisanya tergantung pertanyaannya
Perlu ditranslate tidak?	3 anak tidak perlu 4 anak perlu Sisanya tergantung pertanyaan
Apa sering terjadi misunderstanding?	Sering
Ketika pertanyaan terlalu panjang apa susah dimengerti?	Ya
Pertanyaan yg disukai?	Pakai b.ing dan tidak usah panjang
Pernah dengar HOT?	Belum
a. Adakah dosen melontarkan pertanyaan yg sulit dimengerti?	Ada
Matkulnya apa?	Reading, writing, listening
Matkul yg dosennya paling sering bertanya?	Reading, grammar, vocab, listening
Matkul yang pertanyaannya paling susah?	Reading

2. Discussion

The result of the study, having enormous difference between high and low order, indicated what level of questioning expressed by lecturers most. This study identified low order thinking skill having the highest frequency that was 73% of all. The finding was similar to the research of Soleimani and Khairi [18] where 69,445% lower order thinking questions were used. In line with the research, though there was

different point, Ashadi and Lubis [13] were also found that the lower order still outnumbered the question types, 69%. Further, the doctoral lecturer was the only who convey the lecture using high order. The other two master lecturers delivered their lecture mostly in lower order.

Generally the three lecturers gave the same questions to start and close the lecture, such greeting and asking attendance. The

differences occurred during the lecture process. They were explained as follow:

a. Questioning by the doctoral lecturer

The doctoral lecturer often asked students to think harder. For example, when he explained the students about how to do coding he asked, “How would you group an amount of colorful marbles?” “Arrange three thesis titles related to your interest right now”, was another one. He also ever asked the students to do on the spot compose, even for a simple topic such about standards. The most qualified assignment indicating high order thinking was the instruction to determine the best method to analyze a research problem.

b. Questioning by the master lecturers

The master lecturers very often used simple questions. For example, “Which one is correct, I will go or I am going to go?” and “What are the differences?” One of the lecturers prefers to command the students to demonstrate rather than to construct and formulate. “Perform the task you do in pair in front of the class, I give you 15 minutes to prepare”, the other simple duty to do based on a very clear task.

The data identified form the observation and in-depth interview were supporting each other. When observation indicated the frequently usage of low order thinking skill questioning, the participants explained the reason that was firstly to be simply understood. They add it by declaring that it was not easy to employ high order thinking skill in any subject. Reading and writing might be easier, otherwise structure and vocabulary were subjects with difficulty to utilize high order.

Conclusion

As Soleimani & Kheiri [18] concluded, this study was organized with the similar outcome: that activities and assignments

given to graduate students first led to lower order thinking skills, next led to medium order thinking skills, and finally led to higher order thinking skills. In case of higher order thinking skills is necessary the reality described by the result of this study was discouraging. The participants supported the result by stating that to generate high order thinking skill during the class often met obstacles.

According to the outcome, this study found some implications for students, lecturers and further researchers. Using Bloom taxonomy or other taxonomy to deliver assignments and class activities was very useful to explore students’ creativity. Though it did not guarantee the best output, mainly hope the class would be very active. High order thinking must also be well prepared before the application. Moreover, further research in generating high order thinking skills in any subject needed to examine. It was proved that lecturers found difficulties to apply it on each subject they lecture.

Acknowledgement

The author would like to express sincere gratitude to Indonesia Endowment Fund for Education (LPDP) Ministry of Finance of the Republic of Indonesia for the financial support.

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